 <div style="display: inline-block; vertical-align: middle; text-align: center;"> WASHINGTON STATE DEPARTMENT OF E C O L O G Y </div>		Dangerous Waste Permit Application Part A Form											
Date Received				Reviewed by: <i>UAF</i>				Date: 0 9 2 2 2 0 0 8					
Month Day Year				Approved by: <i>Greta P. Davis</i>				Date: 0 9 2 2 2 0 0 8					
0	9	1	9	2	0	0	8						
I. This form is submitted to: (place an "X" in the appropriate box)													
<input type="checkbox"/>		Request modification to a final status permit (commonly called a "Part B" permit)											
<input checked="" type="checkbox"/>		Request a change under interim status											
<input type="checkbox"/>		Apply for a final status permit. This includes the application for the initial final status permit for a site or for a permit renewal (i.e., a new permit to replace an expiring permit).											
<input type="checkbox"/>		Establish interim status because of the wastes newly regulated on:						(Date)					
		List waste codes:											
II. EPA/State ID Number													
W	A	7	8	9	0	0	0	8	9	6	7		
III. Name of Facility													
US Department of Energy - Hanford Facility													
IV. Facility Location (Physical address not P.O. Box or Route Number)													
A. Street													
825 Jadwin													
City or Town								State		ZIP Code			
Richland								WA		99352			
County Code (if known)			County Name										
0	0	5	Benton										
B. Land Type		C. Geographic Location				D. Facility Existence Date							
		Latitude (degrees, mins, secs)				Longitude (degrees, mins, secs)				Month Day Year			
F		Refer to TOPO Map (Section XV.)				0 3		0 2		1 9 4 3			
V. Facility Mailing Address													
Street or P.O. Box													
P.O. Box 550													
City or Town								State		ZIP Code			
Richland								WA		99352			

VI. Facility contact (Person to be contacted regarding waste activities at facility)																								
Name (last)						(first)																		
Brockman						David																		
Job Title						Phone Number (area code and number)																		
Manager						(509) 376-7395																		
Contact Address																								
Street or P.O. Box																								
P.O. Box 550																								
City or Town						State		ZIP Code																
Richland						WA		99352																
VII. Facility Operator Information																								
A. Name								Phone Number																
Department of Energy Owner/Operator CH2M HILL Plateau Remediation Company Co-Operator for 241-CX Tank System*								(509) 376-7395 (509) 376-0556*																
Street or P.O. Box																								
P.O. Box 550 P.O. Box 1600 *																								
City or Town						State		ZIP Code																
Richland						WA		99352																
B. Operator Type		F																						
C. Does the name in VII.A reflect a proposed change in operator?								<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Co-Operator* change																
If yes, provide the scheduled date for the change:								<table border="1"> <tr> <th colspan="2">Month</th> <th colspan="2">Day</th> <th colspan="2">Year</th> </tr> <tr> <td>1</td><td>0</td> <td>0</td><td>1</td> <td>2</td><td>0</td> </tr> </table>					Month		Day		Year		1	0	0	1	2	0
Month		Day		Year																				
1	0	0	1	2	0																			
D. Is the name listed in VII.A. also the owner? If yes, skip to Section VIII.C.								<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																
VIII. Facility Owner Information																								
A. Name								Phone Number (area code and number)																
David A. Brockman, Operator/Facility-Property Owner								(509) 376-7395																
Street or P.O. Box																								
P.O. Box 550																								
City or Town						State		ZIP Code																
Richland						WA		99352																
B. Owner Type		F																						
C. Does the name in VIII.A reflect a proposed change in owner?								<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																
If yes, provide the scheduled date for the change:								<table border="1"> <tr> <th colspan="2">Month</th> <th colspan="2">Day</th> <th colspan="2">Year</th> </tr> <tr> <td></td><td></td> <td></td><td></td> <td></td><td></td> </tr> </table>					Month		Day		Year							
Month		Day		Year																				
IX. NAICS Codes (5/6 digit codes)																								
A. First						B. Second																		
5	6	2	2	1		Waste Treatment & Disposal	9	2	4	1	1	0	Administration of Air & Water Resource & Solid Waste Management Programs											
C. Third						D. Fourth																		
5	4	1	7	1		Research & Development in the Physical, Engineering, & Life Sciences																		

X. Other Environmental Permits (see instructions)														
A. Permit Type			B. Permit Number										C. Description	
	E		F	F	-	0	1							WAC 246-247, NOC Radioactive Air

XI. Nature of Business (provide a brief description that includes both dangerous waste and non-dangerous waste areas and activities)
<p>The 241-CX Tank System is located east of the 209-E Building in the 200 East Area of the Hanford Facility. The 241-CX Tank System consists of three Tanks--241-CX-70 (CX-70), 241-CX-71 (CX-71), and 241-CX-72 (CX-72). Processes that were associated with these three tanks are as follows.</p> <p>Tank CX-70 was used for approximately one year in the early 1950's, to store high-activity process waste from the reduction/oxidation (REDOX) pilot studies before transferring the waste to Tank Farms. The term REDOX was used for the reduction/oxidation chemical process separating plutonium and uranium from irradiated reactor fuels. Waste removal activities for Tank CX-70 were initiated in the summer of 1987 with the construction of a sluicing/pumping system. The sluicing/pumping system involved using large volumes of water to sluice/pump the solid mixed waste from Tank CX-70 to the Double-Shell Tank System. Approximately 140,000 gallons (529,950 liters) of water were used to sluice the original waste volume of 10,300 gallons (38,986 liters) down to 750 gallons (2,839 liters). This volume remained in Tank CX-70 until December 20, 1991, at which time the waste was placed in approved containers and transferred to the-224-T Transuranic Waste Storage and Assay Facility. The design capacity of Tank CX-70 is 30,000 gallons (113,550 liters). The mixed waste was considered corrosive (D002) because of the presence of sodium hydroxide. The mixed waste contained the toxicity characteristic waste chromium (D007) and was considered a state-only toxic dangerous waste (WT02). The estimated annual quantity of waste that was treated and stored in Tank CX-70 is approximately 19,000 pounds (8,630 kilograms).</p> <p>Tank CX-71 was used from 1952 through 1957 for neutralizing the 201-C process condensate and the coil and condenser cooling water by contact with a bed of limestone aggregate placed in the tank for this purpose. After the June 1957 decontamination flushes, Tank CX-71 was placed out of service. The waste was considered state-only toxic dangerous waste (WT02) because of the presence of cyanides and nitrates. The estimated annual quantity of waste that was treated and stored in Tank CX-71 is approximately 33,400 pounds (15,171 kilograms). The design capacity of Tank CX-71 is 1,000 gallons (3,785 liters).</p> <p>Tank CX-72 was used for approximately 1 year in 1956 when 2,305 gallons (8,725 liters) of Strontium Semiworks Complex mixed waste was transferred into the tank for storage. Tank CX-72 was also used to study the concentration of waste generated from the Strontium Semiworks Complex pilot studies, and as a experimental tank to study the characteristics of self-concentrating waste from the Plutonium Uranium Extraction (PUREX) process. Decontamination flushes from the Strontium Semiworks Complex also might have been sent to Tank CX-72. The waste in the tank was heated until nearly dry. From 1960 through 1967, Tank CX-72 remained idle until taken out of service in 1967. By March 1978, the tank was recorded as being empty. Following a level measurement taken in 1986, supporting the tank was empty, Tank CX-72 was filled with grout. In 1988, a rod from the paddle system was accidentally pulled out of the tank. Based on the contamination on the rod, it is estimated that 24 feet (7.3 meters) of grout was placed over an 11-foot (3.4-meter) deep heel of non-liquid mixed waste. Based on a conservative designation, the mixed waste could consist of toxic constituents (D002, and D004 through D011), and state-only toxic dangerous waste (WT01, and WT02). The design capacity of Tank CX-72 is 2,340 gallons (8,860 liters). The estimated annual quantity of waste that was treated and stored in Tank CX-72 is approximately 19,530 pounds (8,870 kilograms).</p>

EXAMPLE FOR COMPLETING ITEMS XII and XIII (shown in lines numbered X-1, X-2, and X-3 below): A facility has two storage tanks that hold 1200 gallons and 400 gallons respectively. There is also treatment in tanks at 20 gallons/hr. Finally, a one-quarter acre area that is two meters deep will undergo *in situ vitrification*.

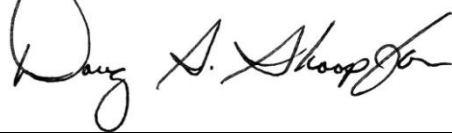


Section XII. Process Codes and Design Capacities								Section XIII. Other Process Codes								
Line Number		A. Process Codes (enter code)			B. Process Design Capacity		C. Process Total Number of Units	Line Number		A. Process Codes (enter code)			B. Process Design Capacity		C. Process Total Number of Units	D. Process Description
					1. Amount	2. Unit of Measure (enter code)							1. Amount	2. Unit of Measure (enter code)		
X	1	S	0	2	1,600	G	002	X	1	T	0	4	700	C	001	In situ vitrification
X	2	T	0	3	20	E	001									
X	3	T	0	4	700	C	001									
	1	S	0	2	33,340	G	003		1							
	2								2							
	3								3							
	4								4							
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1	8							1	8							
1	9							1	9							
2	0							2	0							
2	1							2	1							
2	2							2	2							
2	3							2	3							
2	4							2	4							
2	5							2	5							

XIV. Description of Dangerous Wastes

Example for completing this section: A facility will receive three non-listed wastes, then store and treat them on-site. Two wastes are corrosive only, with the facility receiving and storing the wastes in containers. There will be about 200 pounds per year of each of these two wastes, which will be neutralized in a tank. The other waste is corrosive and ignitable and will be neutralized then blended into hazardous waste fuel. There will be about 100 pounds per year of that waste, which will be received in bulk and put into tanks.

Line Number	A. Dangerous Waste No.				B. Estimated Annual Quantity of Waste	C. Unit of Measure	D. Processes											(2) Process Description [If a code is not entered in D (1)]
							(1) Process Codes											
X 1	D	0	0	2	400	P	S	0	1	T	0	1						
X 2	D	0	0	1	100	P	S	0	2	T	0	1						
X 3	D	0	0	2												Included with above		
1	D	0	0	2	19,000	P	S	0	2							Tank 241-CX-70		
2	D	0	0	7		P	S	0	2							Tank 241-CX-70		
3	W	T	0	2		P	S	0	2							Tank 241-CX-70		
4	W	T	0	2	33,400	P	S	0	2							Tank 241-CX-71		
5	D	0	0	2	19,530	P	S	0	2							Tank 241-CX-72		
6	D	0	0	4		P	S	0	2							Tank 241-CX-72		
7	D	0	0	5		P	S	0	2							Tank 241-CX-72		
8	D	0	0	6		P	S	0	2							Tank 241-CX-72		
9	D	0	0	7		P	S	0	2							Tank 241-CX-72		
10	D	0	0	8		P	S	0	2							Tank 241-CX-72		
11	D	0	0	9		P	S	0	2							Tank 241-CX-72		
12	D	0	1	0		P	S	0	2							Tank 241-CX-72		
13	D	0	1	1		P	S	0	2							Tank 241-CX-72		
14	W	T	0	1		P	S	0	2							Tank 241-CX-72		
15	W	T	0	2		P	S	0	2							Tank 241-CX-72		
16																		
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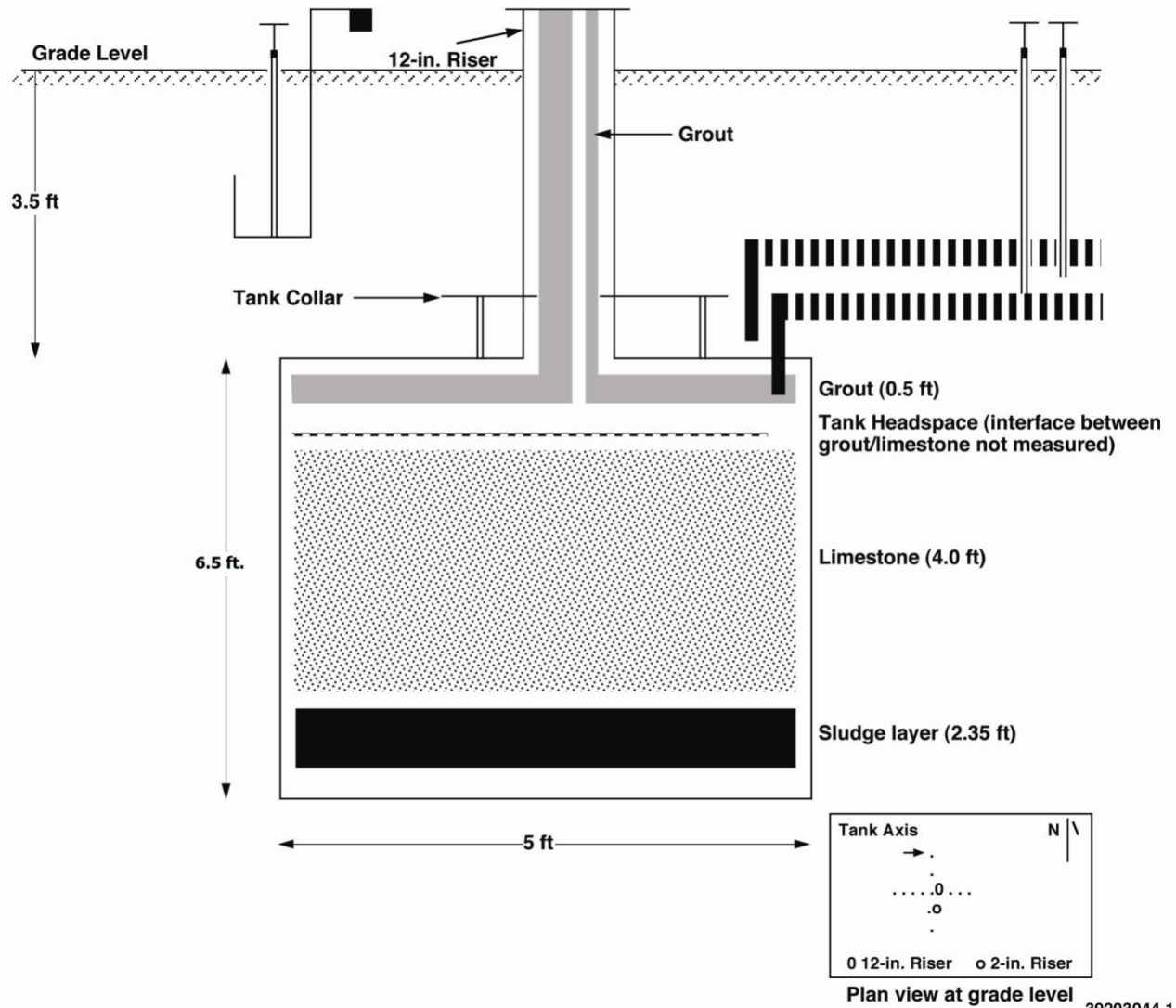
XV. Map Attach to this application a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the outline of the facility; the location of each of its existing and proposed intake and discharge structures; each of its dangerous waste treatment, storage, recycling, or disposal units; and each well where fluids are injected underground. Include all springs, rivers, and other surface water bodies in this map area, plus drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the facility property boundary. The instructions provide additional information on meeting these requirements.
Topographic map is located in the Ecology Library
XVI. Facility Drawing All existing facilities must include a scale drawing of the facility (refer to Instructions for more detail).
XVII. Photographs All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, recycling, and disposal areas; and sites of future storage, treatment, recycling, or disposal areas (refer to Instructions for more detail).

XVIII. Certifications I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
Operator Name and Official Title (type or print) David A. Brockman, Manager U.S. Department of Energy Richland Operations Office	Signature 	Date Signed 9/19/08
Co-Operator* Name and Official Title (type or print) John G. Lehew, III President and Chief Executive Officer CH2M HILL Plateau Remediation Company	Signature 	Date Signed 9/2/08
Co-Operator – Address and Telephone Number* P.O. Box 1600 Richland, WA 99352 (509) 376-0556		
Facility-Property Owner Name and Official Title (type or print) David A. Brockman, Manager U.S. Department of Energy Richland Operations Office	Signature 	Date Signed 9/19/08

Comments

In Section VII. Facility Operator Information, there is no change to DOE as the Facility Owner/Operator; only a change in Co-Operator*. The change in Co-Operator* will be effective October 1, 2008.

241-CX-71 Cylindrical Tank Cross-Sectional View



241-CX Tank System



Tank 241-CX-70



Tank 241-CX-71



Building containing 241-CX-72



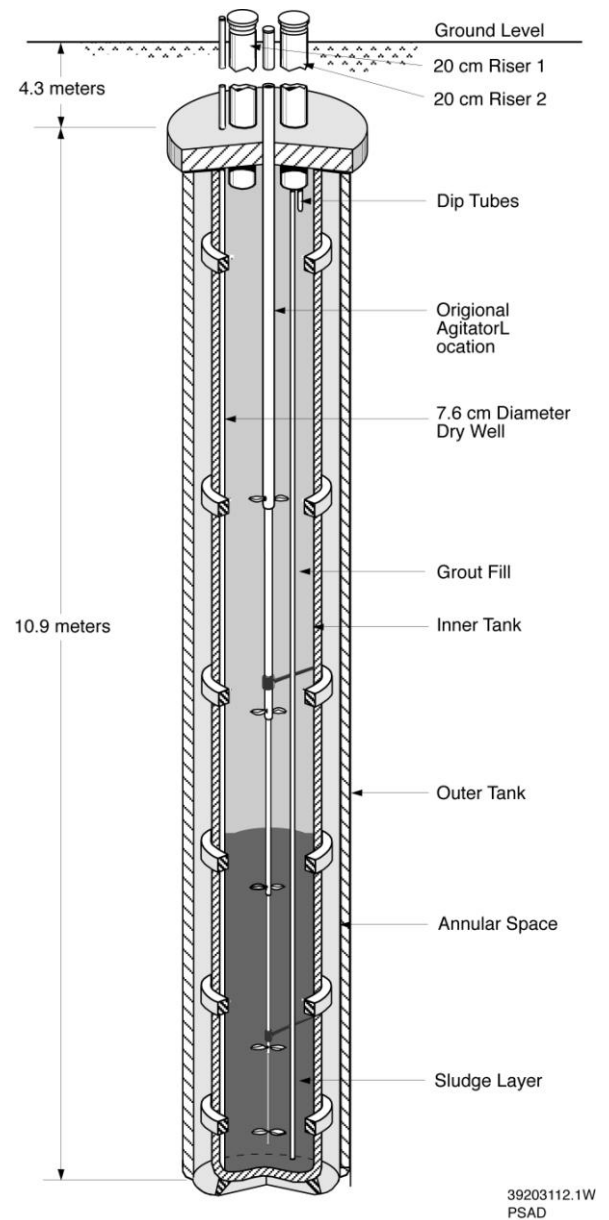
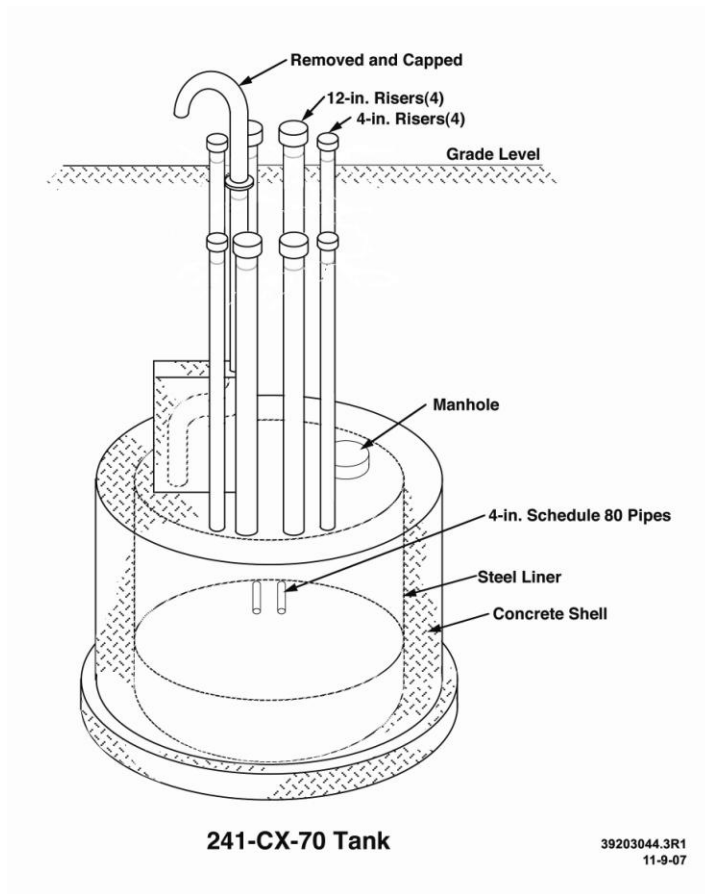
Building containing 241-CX-72



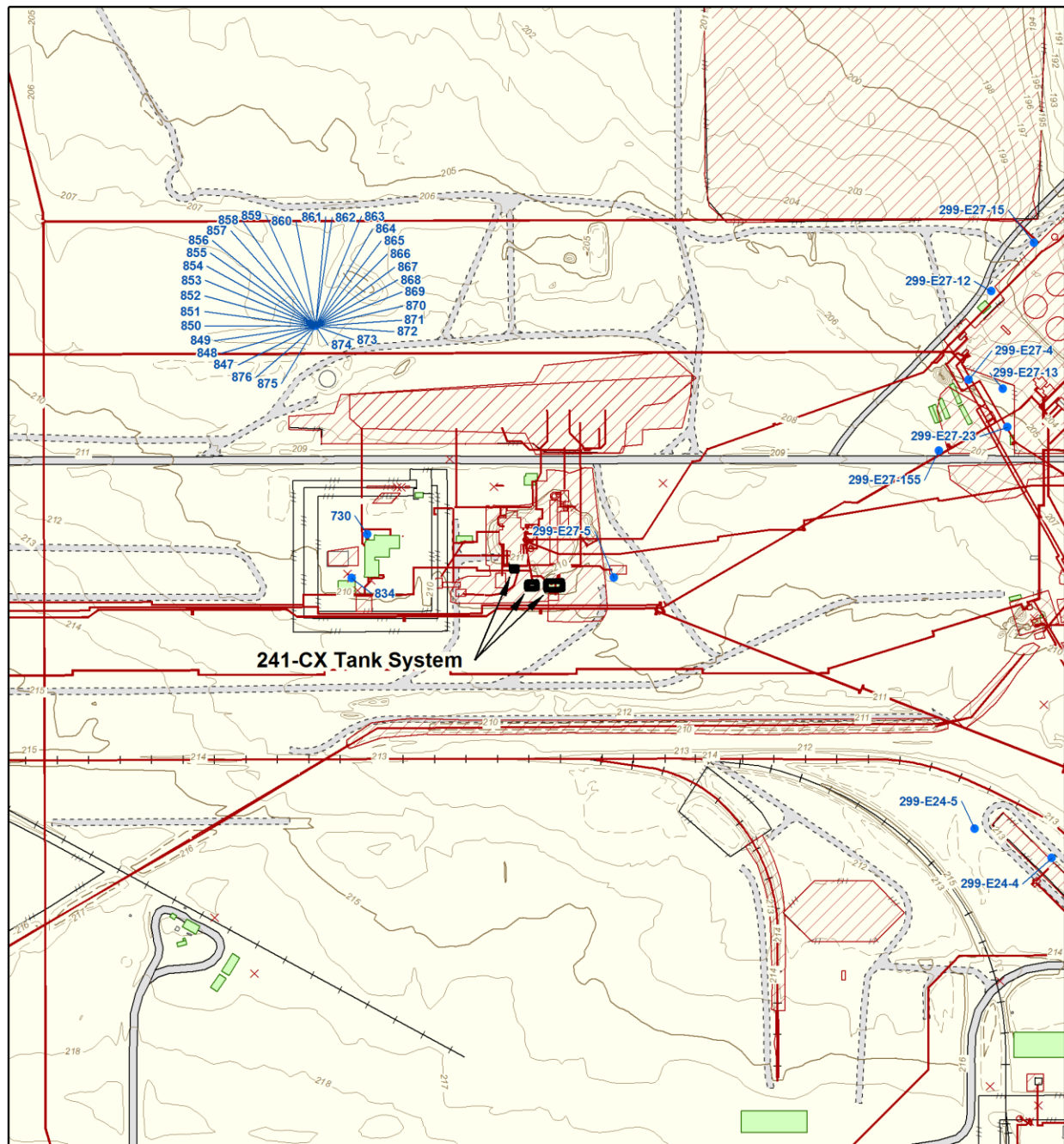
Tank 241-CX-72

93060151-1CN
Photo Taken 1993

241-CX Tank System



Tank 241-CX-72 Cutaway



241-CX Tank System

Prepared for:
US DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
Created and Published by:
Central Mapping Services
Fluor Hanford, Richland, WA
(509) 373-9076
Intended Use: REFERENCE ONLY
Topographic Data:
1996, Bechtel Hanford, Inc.

Hanford Site



Unit Location

- TSD Unit Boundary
- DOE Operating Areas
- Hanford Facility
- Injection and Withdrawal Wells
- Contours at 1 Meter Intervals
- - - Depression Contours
- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- x Spot SWMUs and Known Releases

- Buildings
- Structures
- Concrete
- Major Roads
- - - Service Roads
- + + + Railroads
- = = = Fences

0 50 100 150 200 Meters

0 200 400 600 Feet



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